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Notice of Allowability

Application No.

09/843,597

Applicant(s)

MOSSBERG, THOMAS W.

Examiner

Leo Boutsikaris

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE filed on 5/2/05.
2. ☒ The allowed claim(s) is/are 39,41-50,64-66,75,81,82 and 85-136.
3. ☒ The drawings filed on 26 April 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/2/2005 has been entered.

Terminal Disclaimer

The terminal disclaimer filed on 5/16/2005 disclaiming the terminal portion of any patent granted on this application, which would extend beyond the expiration date of U.S. Patent No. 6,859,318 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Allowable Subject Matter

Claims 39, 41-50, 64-66, 75, 81-82, 85-136 are allowable over the prior art of record for at least the reason that even though the prior art discloses holographic gratings that redirect light from an input port to an output port, the holographic gratings acting as a whole in diffracting the light, the prior art fails to teach or reasonably suggest, regarding claims 39, 41-50, 64-66, 85-117, a method comprising dynamically configuring a configurable programmed holographic structure comprising a set of diffractive elements, wherein each diffractive element of the set is

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
individually contoured and positioned so as to reflectively image at least a portion of an input optical signal between an input optical port and an output optical port, regarding claims 75, 118-129, a method comprising applying energy in a time-varying manner to a configurable programmed holographic structure comprising a set of diffractive elements, wherein each diffractive element of the set is individually contoured and positioned so as to reflectively image at least a portion of an input optical signal between an input optical port and an output optical port, and regarding claims 81-82, 130-136, a method comprising directing an input optical signal to interact with a configurable programmed holographic structure comprising a set of diffractive elements, wherein each diffractive element of the set is individually contoured and positioned so as to reflectively image at least a portion of an input optical signal between an input optical port and an output optical port, as set forth by the claimed combination.

Schultz (US 6,285,813, Fig. 1B) discloses a waveguide grating coupler, wherein a volume grating 106 is used to couple light in and out of waveguide 123. Here, the grating acts a whole in diffracting the light into a preferential direction and/or order (lines 22-42, col. 4, lines 37-59, col. 5), and is designed as a whole (see, for example, lines 1-36, col. 5, where the K vector of the grating is calculated). This is in contrast to the claimed invention, where each individual diffractive element/groove is designed to reflect light from the input to the output, regardless of the action of the rest of the grooves. The function of the holographic structure as a whole is to impart a desired transformation information on the light imaged from the input port to the output port.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Leo Boutsikaris whose telephone number is 571-272-2308.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leo Boutsikaris, Ph.D., J.D.
Primary Patent Examiner, AU 2872
May 16, 2005 

LEONIDAS BOUTSIKARIS
PRIMARY EXAMINER